

ABSTRACT OF THE DISCLOSURE

An acceleration sensor comprises a fixed case member and a cover assembly collectively defining a closed space in which the oscillation plate and the piezoelectric element received therein. The oscillation plate and the piezoelectric element are oscillatably supported by a supporting portion formed on the central bottom portion of the fixed case member. The oscillation plate and the piezoelectric element are integrally oscillatable in two different modes consisting of: a 1/1 oscillation mode where the oscillation plate is irregularly deformed to have the peripheral portion oscillated with a single vector in the oscillation direction of the oscillation plate when the oscillation plate is oscillated with respect to the fixed case member at a resonance frequency f_0 ; and a 1/2 oscillation mode where the oscillation plate is irregularly deformed to have two different half parts of the peripheral portion oscillated with their respective different vectors opposite to each other in the oscillation direction of the oscillation plate when the oscillation plate is oscillated with respect to the fixed case member at a noise frequency f_{01} , and the resonance frequency f_0 and the noise frequency f_{01} are out of the range of effective oscillation frequencies. Thus constructed acceleration sensor is of high performance and appropriate for automatic production at a low cost.